

REMARKS/ARGUMENTS

In the Office Action mailed October 1, 2007, claims 1, 2, 7-12, and 17-20, were rejected. Additionally, claims 3-6 and 13-16 were objected to, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Applicant hereby requests reconsideration of the application in view of the below-provided remarks. No claims are amended, added, or canceled.

Claim Rejections under 35 U.S.C. 112, second paragraph

Claim 12 was rejected under 35 U.S.C. 112, second paragraph. Specifically, the Office Action states that the limitation “the NAND gates” of claim 9 lacks antecedent basis. Applicant submits that claim 9 is amended to resolve the antecedent basis of the NAND gates. Accordingly, Applicant respectfully requests that the rejection of claim 9 under 35 U.S.C. 112, second paragraph, be withdrawn.

Response to Claim Rejections under 35 U.S.C. 103

Claims 1, 2, 7-12, and 17-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (U.S. Pat. No. 5,570,307, hereinafter Takahashi) in view of Fujita et al. (U.S. Pat. Pub. No. 2003/0061250, hereinafter Fujita) and further in view of Schulz (U.S. Pat. No. 4,905,176, hereinafter Schulz). However, Applicant respectfully submits that these claims are patentable over Takahashi, Fujita, and Schulz for the reasons provided below.

Independent Claim 1

Claim 1 recites “a plurality of groups of independent flip-flops, at least some of the groups having different connection configurations” (emphasis added).

In contrast, the combination of cited references does not teach or suggest a plurality of groups of independent flip-flops having different connection configurations. The Office Action relies on Takahashi as purportedly teaching a plurality of groups of independent flip-flops with different connection configurations. However, Takahashi

merely describes a plurality of D-type flip-flops. Takahashi, Fig. 2; col. 4, lines 33-35. While Takahashi describes some flexibility in the number of flip-flops that may be used in the metastable blocks of the dual-channel random number generator (Takahashi, col. 4, lines 35-38), Takahashi does not describe any embodiments in which different types of flip-flops might be used. In other words, Takahashi does not describe different connection configurations for different types of flip-flops.

Moreover, Takahashi does not attempt to describe the connection configurations within the D-type flip-flops shown in Figure 2. Takahashi likely relies on the standard implementation of D-type flip-flops, in which multiple NAND gates are cross-connected in a standard (i.e., unchanging) configuration to enable a delayed output of the data input. However, such reliance on the standard connection configuration of D-type flip-flops is insufficient to teach flip-flops with NAND gates connected in different configurations. Moreover, Takahashi is silent in regard to other types of flip-flops with other connection configurations. Thus, the disclosure of Takahashi can merely be asserted as teaching a single type of flip-flop—a D-type flip-flop—with NAND gates arranged in a single connection configuration. Therefore, the combination of cited references does not teach all of the limitations of the claim because Takahashi does not teach flip-flops having different connection configurations. Accordingly, Applicant respectfully submits claim 1 is patentable over the combination of cited references because the combination of Takahashi, Fujita, and Schulz does not teach all of the limitations of the claim.

Independent Claim 11

Applicant respectfully asserts independent claim 11 is also patentable over the combination of Takahashi, Fujita, and Schulz at least for similar reasons to those stated above in regard to the rejection of independent claim 1. In particular, claim 11 recites “providing a plurality of groups of independent flip-flops, at least some of the groups having different connection configurations” (emphasis added).

Here, although the language of claim 11 differs from the language of claim 1 and the scope of claim 11 should be interpreted independently of claim 1, Applicant respectfully asserts that the remarks provided above in regard to the rejection of claim 1 also apply to the rejection of claim 11. Accordingly, Applicant respectfully asserts claim

11 is patentable over the combination of Takahashi, Fujita, and Schulz because Takahashi does not teach flip-flops having different connection configurations.

Dependent Claims 2-10 and 12-20

Claims 2-10 and 12-20 depend from and incorporate all of the limitations of the corresponding independent claims 1 and 11, respectively. Applicant respectfully asserts claims 2-10 and 12-20 are allowable based on allowable base claims. Additionally, each of claims 2-10 and 12-20 may be allowable for further reasons.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-3444** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-3444** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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